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Claims

1. A wafer management system, comprising: at least a first stationary wafer storage system, said first stationary wafer storage system having a first buffer for storing a plurality of wafers, a first load-and-unload station for transferring wafers between said first buffer and first intra-bay pods assigned to a first bay, and a second load-and-unload station for transferring wafers between said first buffer and further pods.
2. The wafer management system according to claim 1, further comprising at least a second stationary wafer storage system, said second wafer storage system having a second buffer for storing a further plurality of wafers, a third load-and-unload station for transferring wafers between said second buffer and second intra-bay pods assigned to a second bay, and a fourth load-and-unload station for transferring wafers between said second buffer and said further pods.
3. The wafer management system according to claim 1, wherein at least one of said first load-and-unload station and said second load-and-unload station comprises means for labeling said wafers with information, said information concerning at least one or more of the following fields: wafer identification, lot identification, place of storage in said first buffer, and processing status.

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4. The wafer management system according to claim 1,
wherein at least one of said first load-and-unload
station and said second load-and-unload station
comprises means for reading information provided on
5 said wafers, said information concerning at least one
or more of the following fields: wafer identification,
lot identification, place of storage in said first
buffer, and processing status.

10 5. The wafer management system according to claim 1,
wherein at least one of said first load-and-unload
station and said second load-and-unload station
comprises means for reading information provided on
said wafers and means for labeling said wafers with
15 information, said information concerning at least one
or more of the following fields: wafer identification,
lot identification, place of storage in said first
buffer, processing status.

20 6. The wafer management system according to claim 1,
wherein said wafers are stored in a laminar gas flow
within said first buffer.

25 7. The wafer management system according to claim 1,
wherein said first buffer comprises slots for storing
said wafers, and means for transferring said wafers
between said first load-and-unload station and said
slots or between said second load und unload station
and said slots.

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8. A method for managing wafers, said method comprising the following steps:
- a) transferring wafers into a first stationary wafer storage system having a first buffer for storing a plurality of wafers, and
 - b) transferring selected wafers from said first buffer to first intra-bay pods assigned to a first bay via a first load-and-unload station of said first stationary wafer storage system, or to inter-bay pods via a second load-and-unload station of said first stationary wafer storage system.
9. The method according to claim 8, further comprising the step of transferring wafers directly from intra-bay pods to inter-bay pods or from inter-bay pods to intra-bay pods.
10. The method according to claim 8, wherein step a) further comprises labeling at least some of said wafers with information or reading information from at least some of said wafers, said information concerning at least one or more of the following fields: wafer identification, lot identification, place of storage in said first buffer, and processing status.

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11. The method according to claim 8, wherein step b) further comprises: labeling at least some of said wafers with information or reading information from at least some of said wafers, said information concerning at least one or more of the following fields: wafer identification, lot identification, place of storage in said first buffer, and processing status.

12. The method according to claim 8, wherein step b) further comprises: transporting said first intra-bay pods to at least one processing tool assigned to said first bay.

13. The method according to claim 8, further comprising the step of downloading instructions from a storage system wafer management software to a tool directing tool to use a desired recipe.

14. The method according to claim 8, wherein, between performing said steps a) and b), said wafers are stored in a laminar gas flow within said first buffer.

15. The method according to claim 8, wherein, between performing said steps a) and b), said wafers are stored in slots provided in said first buffer.

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16. A method for transporting wafers from a first

processing tool assigned to a first bay to a second
processing tool assigned to a second bay, comprising
the following steps:

- 5 - transferring said wafers from said first processing
 tool to at least one first intra-bay pod;
- transporting said at least one intra-bay pod to a
 first stationary storage system comprising a first
10 buffer for storing a plurality of wafers out of
 pods;
- transferring said wafers into said first buffer via
 a first load-and-unload station;
- transferring said wafers from said first buffer to
 at least one pod;
- 15 - transporting said at least one pod to a second
 stationary storage system comprising a second buffer
 for storing a plurality of wafers out of pods;
- transferring said wafers from said at least one pod
 into said second buffer;
- 20 - transferring said wafers from said second buffer to
 at least one second intra-bay pod;
- transporting said at least one second intra-bay pod
 to said second processing tool; and
- transferring said wafers from said at least one
25 second intra-bay pod to said second processing tool.

17. The method according to claim 16, further comprising
the step of transferring said wafers from said first
stationary storage system to said second stationary
30 storage system where the first stationary storage
 system reaches capacity.

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